

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Currently amended) A method for generating or increasing the resistance of a plant to a plant pathogen of the phylum Oomyceta comprising increasing the activity of a Rpi-blb2 protein in the plant or a tissue, organ or cell of [[a]] the plant or a part thereof by expressing a transgenic Rpi-blb2 protein encoding nucleic acid molecule and/or increasing the copy number of a Rpi-blb2 protein encoding nucleic acid molecule, wherein the plant has increased resistance to the plant pathogen of the phylum Oomyceta, wherein said Rpi-blb2 protein encoding nucleic acid molecule is selected from the group consisting of:
 - (a) a nucleic acid molecule encoding the polypeptide depicted in SEQ ID NO: 2 or 4;
 - (b) a nucleic acid molecule comprising the coding sequence as depicted in SEQ ID NO: 3 or 5 or 6;
 - (c) a nucleic acid molecule encoding a polypeptide comprising a sequence having greater than 82% identity to the amino acid sequence of the polypeptide encoded by the nucleic acid molecule of (a) or (b);
 - (d) a nucleic acid molecule the complementary strand of which hybridizes under high stringency conditions with the nucleic acid molecule of (a) or (b); and
 - (e) a nucleic acid molecule encoding a biologically active portion of the polypeptide encoded by the nucleic acid molecule of (a) or (b).
2. (Cancelled)
3. (Previously presented) The method of claim 1, wherein the activity of a further resistance protein is increased.
4. (Currently amended) The method of claim 1, wherein the activity is increased due to a de novo-expression.
5. (Currently amended) The method of claim 1, wherein the activity is an endogenous activity of a Rpi-blb2 and/or the further resistance protein is increased.
6. (Currently amended) The method of claim [[1]] 3, comprising one or more of the following steps

- a) stabilizing the resistance protein;
- b) stabilizing the resistance protein encoding mRNA;
- c) increasing the specific activity of the resistance protein;
- d) expressing or increasing the expression of a homologous or artificial transcription factor for resistance protein expression;
- e) ~~stimulate~~ stimulating resistance protein activity through exogenous inducing factors;
- f) expressing a transgenic resistance protein encoding gene; and/or
- g) increasing the copy number of the resistance protein encoding gene.

7. (Currently amended) The method of claim 1 which results in reduction in the sporulation index of at least 30% after infection with *P. infestans* compared to a wild type.

8. (Withdrawn, currently amended) A polynucleotide encoding a Rpi-blb2 protein ~~comprising a nucleic acid molecule~~ selected from the group consisting of:

(a) a nucleic acid molecule encoding at least the mature form of the polypeptide depicted in SEQ ID NO: 2 or 4;

(b) a nucleic acid molecule[[s]] comprising the coding sequence as depicted in SEQ ID NO: ~~1 or 3 or 5 or 6 encoding at least the mature form of the polypeptide~~;

~~(c) a nucleic acid molecule the nucleotide sequence of which is degenerate as a result of the genetic code to a nucleotide sequence of (a) or (b);~~

~~(d) a nucleic acid molecule encoding a polypeptide derived from the polypeptide encoded by a polynucleotide of (a) to (c) by way of substitution, deletion and/or addition of one or several amino acids of the amino acid sequence of the polypeptide encoded by a polynucleotide of (a) to (c);~~

(e) (c) a nucleic acid molecule encoding a polypeptide the comprising a sequence of which has an identity of 70% or more having greater than 82% identity to the amino acid sequence of the polypeptide encoded by [[a]] the nucleic acid molecule of (a) or (b);

(d) a nucleic acid molecule the complementary strand of which hybridizes under high stringency conditions with the nucleic acid molecule of (a) or (b); and

(e) a nucleic acid molecule encoding a biologically active portion of the polypeptide encoded by the nucleic acid molecule of (a) or (b).

~~(f) nucleic acid molecules comprising a fragment or an epitope bearing portion of a polypeptide encoded by a nucleic acid molecule of any one of (a) to (e);~~

~~(g) nucleic acid molecule comprising a polynucleotide having a sequence of a nucleic acid molecule amplified from a nucleic acid library using the primers as listed in Tab.3b;~~

~~(h) nucleic acid molecule encoding polypeptide fragment beginning with amino acid: 1, 30, 50, 100, 200, 300, 500, or 1000 and stopping with amino acid 1276, 1000, 500, 300, 200, 50, or 30 of a polypeptide encoded by any one of (a) to (g);~~

~~(i) nucleic acid molecule comprising at least 20 nucleotides of a polynucleotide of any one of (a) or (d);~~

~~(j) nucleic acid molecule encoding a polypeptide being recognized by a monoclonal antibodies that have been raised against a polypeptide encoded by a nucleic acid molecule of any one of (a) to (h);~~

~~(k) nucleic acid molecule obtainable by screening an appropriate library under stringent conditions with a probe having the sequence of the nucleic acid molecule of any one of (a) to (j) or of a fragment thereof of at least 20; and~~

~~(l) nucleic acid molecule the complementary strand of which hybridises under stringent conditions with a nucleic acid molecule of any one of (a) or (k);~~

~~or the complementary strand of any one of (a) to (l);~~

~~or encoding a polypeptide encoded by a segment of chromosome or of linkage group 6 of Solanum bulbocastanum or Solanum tuberosum which co-segregates with a marker selected from table 3a or 3b or comprises a replication site or hybridisation site for said marker and which mediates resistance to pathogens of the phylum Oomyceta;~~

~~and whereby the polynucleotide does not consist of the sequence of Mi1.1 or Mi1.2 as depicted in SEQ ID NO: 7 or 9.~~

9. (Withdrawn) The polynucleotide of claim 8, wherein the marker is E40M58, CT119, or CT216.
10. (Withdrawn) The polynucleotide of claim 8 which is DNA or RNA.
11. (Withdrawn) A method for making a recombinant vector comprising inserting the polynucleotide of claim 8 into a vector or inserting said polynucleotide and a further resistance protein.
12. (Withdrawn) A vector containing the polynucleotide of claim 8 or comprising said polynucleotide and a further resistance gene.
13. (Withdrawn) The vector of claim 12 in which a polynucleotide encoding Rpi-blb2 protein or encoding the further resistance protein is operatively linked to expression control sequences and/or is operatively linked to a nucleic acid sequence encoding a transgenic expression regulating signal allowing expression in prokaryotic or eukaryotic host cells.
14. (Withdrawn) The vector of claim 12 in which the polynucleotide encoding Rpi-blb2 protein or encoding a further resistance protein is operatively linked to expression control sequences of the same species origin as the polynucleotide encoding Rpi-blb2 protein or the further resistance protein.
15. (Withdrawn) A method of making a recombinant host cell comprising introducing the vector of claim 12 or introducing said vector and a vector for expressing a further resistance protein into a host cell.
16. (Withdrawn) A host cell produced according to the method of claim 15.
17. (Withdrawn) The host cell of claim 16, which is E. coli, Baculovirus, Agrobacterium, or a plant cell.
18. (Withdrawn) A process for the production of a Rpi-blb2-polypeptide comprising culturing the host cell of claim 16 and recovering the polypeptide encoded by said polynucleotide and expressed by the host cell from the culture or the host cells.
19. (Withdrawn) A polypeptide having the amino acid sequence encoded by a polynucleotide of claim 8.
20. (Withdrawn) A polypeptide having Rpi-blb2 activity.

21. (Withdrawn) An antibody that binds specifically to the polypeptide of claim 19.
22. (Withdrawn) An antisense nucleic acid molecule comprising the complementary sequence of the polynucleotide of claim 8.
23. (Withdrawn) A method for the production of a transgenic plant, plant cell or plant tissue or a part thereof comprising introducing the polynucleotide of claim 8 or said polynucleotide and a polynucleotide encoding a further resistance protein into the genome of said plant, plant tissue or plant cell or a part thereof.
24. (Withdrawn) A plant cell comprising the polynucleotide of claim 8, or a vector containing the polynucleotide of claim 8 or comprising the polynucleotide of claim 8 and a further resistance gene.
25. (Withdrawn) A transgenic plant or plant tissue or a part thereof comprising the plant cell of claim 24.
26. (Withdrawn) A method for producing a plant or a part thereof resistant to a plant pathogen of the phylum Oomyceta comprising
expressing in the plant or a part thereof the polypeptide of claim 19 and a further resistance protein.
27. (Withdrawn) A method for producing a plant or a part thereof with a durable resistance to a Phytophthora sp. comprising co-expressing in the plant or a part thereof Rpi-blb and Rpi-blb2 protein or the polypeptide of claim 19.
28. (Withdrawn) The transgenic plant or plant tissue of claim 25, which upon the presence of the polynucleotide or the vector is resistant to a plant pathogen of the phylum Oomyceta.
29. (Withdrawn) Harvestable parts of the transgenic plant or plant tissue of claim 25.
30. (Withdrawn) Propagation material of the transgenic plant or plant tissue of claim 25.
31. (Withdrawn) A method for producing a plant or a plant tissue, plant organ, or a plant cell or a part thereof resistant to a plant pathogen of the phylum Oomyceta comprising introducing the vector of claim 12 into a plant, plant tissue or plant cell or a part thereof.
32. (Withdrawn) A method for the identification of a compound stimulating resistance to a plant pathogen of the phylum Oomyceta comprising:

- (a) contacting cells which express the polypeptide of claim 19 or its mRNA with a candidate compound under cell cultivation conditions;
- (b) assaying an increase in expression of said polypeptide or said mRNA;
- (c) comparing the expression level to a standard response made in the absence of said candidate compound; whereby, an increased expression over the standard indicates that the compound is stimulating resistance.

33. (Cancelled)

34. (Withdrawn) A diagnostic composition, comprising the polynucleotide of claim 8, a vector an antibody that binds specifically to a polypeptide having the amino acid sequence encoded by the polynucleotide of claim 8 or an antisense nucleic acid molecule comprising the complementary sequence of the polynucleotide of claim 8 and optionally suitable means for detection.

35. (Withdrawn) A kit comprising the polynucleotide of claim 8, a vector, host cell, plant cell, plant or plant tissue comprising the polynucleotide of claim 8, or harvestable part of, or propagation material derived therefrom, or an antibody that binds specifically to a polypeptide having the amino acid sequence encoded by the polynucleotide of claim 8 or an antisense nucleic acid molecule comprising the complementary sequence of the polynucleotide of claim 8.

36. (Withdrawn) A method for the production of a plant crop protectant comprising providing the polynucleotide of claim 8 and formulating the polynucleotide in a form applicable as an agricultural composition.

37. (Withdrawn) The polynucleotide of claim 8 or a vector, host cell, plant cell, plant tissue, plant, or kit comprising the polynucleotide of claim 8, wherein the plant pathogen is of the order Pythiales or Peronosperales.

38. (Withdrawn) The polynucleotide of claim 8 or a vector, host cell, plant cell, plant tissue, plant, or kit comprising the polynucleotide of claim 8, wherein the pathogen is of the species *P. infestans*, *Phytophthora erythroseptica*, *Phytophthora capsici*, *Phytophthora sojae*, *Phytophthora parasitica* var. *nicotianae*, *Bremia lactuca*, *Peronospora tabaci* or *Plasmopara viticola*.

39. (Currently amended) The method of claim 1, wherein the Rpi-blb2 protein is characterized by a P-loop and a NBS domain.
40. (Withdrawn) The vector of claim 12, or a host cell, plant cell, plant tissue, plant, or kit comprising the vector of claim 12, wherein the further resistance gene is a gene encoding Rpi-blb, R1, R-ber, Rpi1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, Ph-1, Ph-2 and/or Ph-3.
41. (Withdrawn) The vector of claim 12, or a host cell, plant cell, plant tissue, plant, or kit comprising the vector of claim 12, wherein the further resistance protein is the Rpi-blb protein.
42. (Withdrawn) The plant cell of claim 24, or plant tissue, plant, or kit comprising the plant cell of claim 24 wherein the plant, plant cell or plant tissue is selected from the group consisting of Menyanthaceae, Solanaceae, Sclerophylacaceae, Duckeodendraceae, Goetzeaceae, Convolvulaceae, Cuscutaceae, Polemoniaceae, and Hydrophyllaceae.
43. (Withdrawn) The polynucleotide of claim 8, a polypeptide encoded by the polynucleotide of claim 8, a host cell, plant cell, plant tissue, or plant comprising the polynucleotide of claim 8, wherein the polynucleotide, the polypeptide, the plant cell, the host cell, the plant tissue or the plant is derived from a member of the Solanaceae family selected from the group consisting of *S. bulbocastanum*, potato (*S. tuberosum*), tomato (*S. lycopersicum* or *Lycopersicon lycopersicum* (L.) Karsten ex Farwell), petunia, tree tomato (*S. betaceum*), pear melon (*S. muricatum*) and eggplant (*S. melongena*).
44. (New) The method of claim 3, wherein the activity of the further resistance protein is an endogenous activity.
45. (New) The method of claim 1, comprising one or more of the following steps
- a) stabilizing the Rpi-blb2 protein;
 - b) stabilizing the Rpi-blb2 protein encoding mRNA;
 - c) increasing the specific activity of the Rpi-blb2 protein;
 - d) expressing or increasing the expression of a homologous or artificial transcription factor for the Rpi-blb2 protein expression;
 - e) stimulating the Rpi-blb2 protein activity through exogenous inducing factors;
 - f) expressing a transgenic Rpi-blb2 protein encoding gene; and/or

g) increasing the copy number of the Rpi-blb2 protein encoding gene.

46. (New) The method of claim 1, wherein the Rpi-blb2 protein encoding nucleic acid molecule is a nucleic acid molecule encoding a polypeptide comprising a sequence having greater than 82% identity to the amino acid sequence of SEQ ID NO: 2 or 4, wherein the polypeptide comprises a NBS domain and an LRR domain.